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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/492,602	01/27/2000	Jason L. Gridley	29423/207	1075

23460 7590 06/27/2002

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EXAMINER

FISCHER, JUSTIN R

ART UNIT PAPER NUMBER

1733

DATE MAILED: 06/27/2002

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/492,602

Applicant(s)

GRIDLEY ET AL.

Examiner

Justin R Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-34, 40-50 and 54-57 is/are pending in the application.
- 4a) Of the above claim(s) 35-39 and 51-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-34, 41-50 and 54-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 22 March 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9, 10. 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-22 are cancelled per Amendment A on March 22, 2002.

Election/Restrictions

2. Newly submitted claims 35-39 and 51-53 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: they define independent invention having a unique and separate means for establishing patentability, as compared to the originally presented claims. In this instance, the originally drafted claims were directed to an apparatus for retreading tires having a variable force tread applicator (claim 22). Newly submitted claims 35-39 do not require the use of a variable force tread applicator and additionally require a specific gum cushion applicator having a tire-contacting drive mechanism, a transfer mechanism (gears), and a dispensing mechanism. Thus, it is evident that the apparatus defined by claims 35-39 contains a different and distinct structure as compared to that disclosed by the originally drafted claims since each apparatus contains limitations not required by the other. As such, these apparatus represent independent inventions, each having a unique and separate means for establishing patentability and thus are properly restrictable. Regarding claims 51-53, these claims define a specific apparatus for determining the location of the front and rear ends of the length of tread. In particular, these claims require a first track encoder, a second track encoder, and a hub encoder. It is noted that the originally presented claims were directed to a generic method and apparatus for obtaining these distances and as such they were not deemed to be restrictable. However, newly submitted claims 51-53 are directed to a specific apparatus that is not detailed in the originally presented claims (method or apparatus).

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In this instance, the method can be practiced by a materially different apparatus, such as comparing the angular rate of the hub with the elapsed time to determine the circumferential distance not yet covered (subtract from known tire circumference), in which case all three of the encoders, two of which are movable, in accordance to the limitations of the claimed invention are not required. As such, the apparatus defined by the newly submitted claims is an independent invention with respect to the method of the claimed invention, each having a unique and separate means for establishing patentability.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 35-39 and 51-53 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 23-29 and 40-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (US 4,096,008, of record) in view of Wulker (US 5,942,059, newly cited). Taylor is directed to a method of retreading tires comprising mounting a tire casing on a rotatable hub or drum, applying a length of cushion gum, measuring the

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circumference of the tire casing, automatically dispensing a length of tire tread based on the measured circumference, cutting said length of tire tread, and applying the cut length of tire tread to the tire casing. The reference, however, is silent with respect to (a) dispensing the cushion gum at a slower rate as compared to the peripheral speed of the tire casing and (b) adjusting the tread length prior to cutting so as to match the ends of a given length of tread. Regarding the dispensing rate, it is well known and conventional in the tire industry to slightly decrease the dispensing rate as compared to the peripheral velocity of the tire casing in order to obtain a controlled stretch and ultimately optimize the degree of adhesion, as evidenced by Wulker (Column 4, Lines 58-61). With respect to "adjusting" the tread, it is well known and conventional to provide both manual and automatic means to provide a desired length of tread and in particular, when using a repeating tread pattern, it is desired to match the ends of said length of tread to obtain an aesthetic quality. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to dispense the cushion gum and adjust the tread strip in accordance to the limitations of the claimed invention, in view of Wulker, as set forth below.

As previously stated, Taylor only differs from the method of the claimed invention in that it is silent with respect to an "adjusting" step and the dispensing relationship. In applying tread patterns, it is extensively desired that ends of tread patterns match in order to produce an aesthetic quality. In order to obtain such a match, it is sometimes necessary to visually adjust the length of the tread, while at other times this function can be accomplished by automated means. In any event, the use of some means to obtain

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a desired length of tread when taking into account the tread pattern is well known in the tire industry for the reasons detailed above.

With respect to the dispensing rate, although Taylor is silent with respect to this feature, it is well known and conventional to control the dispensing rate and the tire casing peripheral speed in order to obtain uniform stretching and optimize the degree of adhesion to the tire casing. Wulker provides one example in which the peripheral speed of the tire casing is approximately 10% greater than the dispensing speed to create a desired degree of stretching. One of ordinary skill in the art at the time of the invention would have been motivated to define such a relationship in Taylor for the benefits detailed above, it being recognized that increased adhesion is desired in all tires.

Regarding claims 24, 41, and 42, the apparatus of Taylor includes a lineal measurement device.

As per claim 25, it is well known in the tire industry that the angular rate of the hub or drum can be modified in relation to different tire sizes in order to obtain the same peripheral speed at the surface of the tire casing. This design provides a single apparatus that can accommodate a plurality of tire sizes.

With respect to claims 26-28, the tread material of Taylor is cut in response to an automatically determined length via the lineal measurement device. As previously stated, it is also known provide both manual and automatic means to cut a desired length of tread, each providing a unique benefit to the production method. The manual or operator-controlled means has the benefit of allowing an operator to visually inspect the tread ends to provide a desired match (avoids any miscalculation by automated

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system) while the automated means obviously increases efficiency, it being recognized that matching tread ends are desired in all tires to obtain an aesthetic quality.

As per claims 29, 30, and 33, Taylor depicts a first application/pressure roller 9 and a second set of pressure rollers 13, 14 to control the pressure when applying the cushion gum and/or the length of tread.

With respect to claim 31, Wulker suggests that the ply material is dispensed at a rate that is between 91 and 100% of the tangential velocity of the periphery of the tire casing.

Regarding claim 40, the retreading method of Taylor detailed above is carried out by an apparatus having a rotatable hub or drum, a cushion gum applicator, a tread dispenser, and a tread applicator, as best depicted in Figure 1. It is noted that the claim contains additional limitations regarding the method by which the components of the apparatus communicate. These limitations do not further define the structure of the claimed apparatus. Lastly, the apparatus of Taylor has the capability to be configured in the manner set forth by the claimed invention, it being recognized that Taylor does contain a lineal measurement device that communicates with the tread dispensing assembly.

With respect to claims 43 and 45-47 a motor drives the rotatable hub or drum of Taylor. The language "is configured to rotate..." does not further define the structure of the claimed apparatus, although it is well known and conventional to relate the angular rate of the hub with the circumference of the tire to obtain the same tangential velocity at the periphery of the tire casing in different size tires.

Regarding claim 44, Taylor depicts the use of a rotatable spindle.

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As per claim 48, Taylor discloses the use of a first application/pressure roller 9 and second set of pressure or stitching rollers 13,14.

With respect to claim 49, this limitation does not further define the structure of the claimed invention. In any event, Taylor is directed to a cementless process in order to eliminate highly volatile adhesives and reduce manufacturing costs (Column 3, Lines 45-60).

5. Claims 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor and Wulker as applied to claim 23 above and further in view of Continental (DE 2105765). As previously stated, Taylor in view of Wulker defines a retreading method in accordance to the limitations of claim 23 above. The references, however, are silent with respect to controlling the pressure applied during application of the length of tread. Continental, though, is directed to a similar tread application method in which a variable pressure is applied to the tread based on the length of tread not yet applied and the angular rotation of the drum, further optimizing the adhesion of the tread to the tire casing. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include such a pressure controlling means, as suggested by Continental, in the method of Taylor and Wulker, as set forth below.

Taylor depicts a first application/pressure roller 9 and a second set of pressure rollers 13, 14. Although the reference is silent as to any variation in the applied pressure, it is known to vary the pressure as a function of the unapplied tread and the circumferential length of the tire casing yet to be covered, as evidence by Continental. In this instance, Continental uses the angular rotation of the drum and the unapplied tread length to control the amount of pressure. Based on the angular rate of the drum

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and the known tire circumference, the circumferential length yet to be covered is easily calculated as a function of the elapsed time. Thus, the pressure variation detailed by Continental does result from a comparison between the length of unapplied tread and the casing circumferential distance yet to be covered, it being recognized that an improvement in tire adhesion is a desired property in all tires.

6. Claims 50 and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor as applied to claim 40 above and further in view of Continental. Taylor teaches a retreading apparatus having a rotatable hub, a cushion gum applicator, a tread dispenser, a track or conveying region, an application/pressure roller, a series of pressure/stitching rollers. Although the application/pressure roller is not defines a “variable force tread applicator”, it is well known to form said application/pressure roller with this capacity, as evidence by Continental, in order to optimize the degree of adhesion. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a variable force application, as suggested by Continental, in the apparatus of Taylor, as set forth below.

With respect to claims 50 and 54, Taylor does contain an application/pressure roller that applies a length of tread onto the tire casing. Although not describes as a “variable force tread applicator”, it is clearly evident that the apparatus of the claimed invention and Taylor are the same, i.e. they both contain an application/pressure roller. The only difference is that the roller of the claimed invention communicates with the rest of the apparatus to control the amount of pressure applied. Continental is cited to illustrate the conventional use of “variable force applicators” in the tire industry, and particularly in the retreading art. As such, one of ordinary skill in the art at the time of

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the invention would have been motivated to include a "variable force applicator" for the benefits detailed above. Regarding claim 54, the language "is configured...." does not further limit the structure of the claimed apparatus.

As per claim 55, the variable force applicator of Taylor in view of Continental includes an application roller. Furthermore, said application roller is capable of being moved in a direction normal to the circumference of the tire casing.

Regarding claim 56, these limitations define a method of applying a cushion gum material and a tread material, it being noted that the apparatus of Taylor is capable of functioning in the claimed manner.

With respect to claim 57, Taylor contains a lineal measurement device.

Response to Arguments

7. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

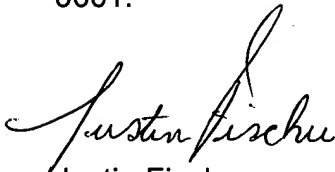
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Justin Fischer

June 16, 2002


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700